DOCUMENT RESUME

ED 450 765 IR 058 021

AUTHOR	Savenije, Bas; Grygierczyk, Natalia
TITLE	Libraries without Resources: Towards Personal Collections.
PUB DATE	2000-08-00
NOTE	9p.; In: IFLA Council and General Conference: Conference Proceedings (66th, Jerusalem, Israel, August 13-18, 2000); see IR 057 981.
AVAILABLE FROM	For full text: http://www.ifla.org/IV/ifla66/papers/015-134e.htm.
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Access to Information; *Electronic Libraries; Futures (of Society); Information Retrieval; Information Technology; Library Collections; Library Development; *Library Role; *Library Services; *User Needs (Information)
IDENTIFIERS	*Electronic Resources; *License Agreements

ABSTRACT

The main function of the library of the future is to provide access to electronic sources stored elsewhere. In order to comply with the users' needs, therefore, flexible license scenarios are necessary. Another future function of the library will be to set up and maintain a personal alerting system and to assist users in organizing their own information, which should be integrated as much as possible in specific work processes of individual users. This means that the library of the future no longer provides a collection of information in the traditional sense of the term, but an access to that collection. The library's tools, facilities, and infrastructure enable users to create their own information systems: collections consisting of links to information sources relevant for their personal use. This paper begins with a section that discusses recent trends in library activities. The second section addresses access to electronic sources, including possibilities for providing access, workable variants for licenses for access to electronic information (i.e., free access, full licenses for well-defined user groups, and pay-per-view), and information retrieval and user interfaces. The third section describes services of the electronic library, including: search facilities; personal alerting system; personal homepage facilities; facilities for the integration of information services in the user's primary processes; and interactivity. The fourth section considers consequences for collection management. (Author/MES)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 450 765

66th IFLA Council and General Conference

Jerusalem, Israel, 13-18 August

Conference Proceedings

A.L. Van Wesemael

Code Number: 015-134-E
Division Number: V
Professional Group: Acquisition and Collection Development
Joint Meeting with: Serial Publications
Meeting Number: 134
Simultaneous Interpretation: *Yes*

Libraries without resources: towards personal collections

Bas Savenije
E-mail: b.savenije@library.uu.nl
and
Natalia Grygierczyk

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Abstract

The main function of the library of the future is to provide access to electronic sources stored elsewhere. In order to comply with the users' needs, therefore, flexible license scenarios are necessary.Another future function of the library will be to set up and maintain a personal alerting system and to assist users in organising their own information, which should be integrated as much as possible in specific work processes of individual users.

This means that the library of the future no longer provides a collection of information in the traditional sense of the term, but an access to that collection. The library's tools, facilities and infrastructure enable users to create their own information systems: collections consisting of links to information sources relevant for their personal use.

Paper

Towards the creation of digital libraries

The first wave of library computerisation took place in the seventies. During that period manual back-room activities, such as acquisition, distribution and cataloguing, were turned into computer-controlled activities. As a result, the

IR058021

1 of 8 BEST COPY AVAILABLE 2/12/01 4:31 PM

library's traditional customers had to fundamentally reorient themselves to the new way in which bibliographic information was now becoming available, that is through an on-line public access catalogue (OPAC). This period also saw the introduction of the first local bibliographic and indexing databases, as well as various other databases. During the second wave of library computerisation, which started in the 90s, the focus was on the deployment of computer networks providing access to remote electronic information by means of library information systems. Access to electronic information is no longer limited to so-called secondary information (catalogues, bibliographic databases). Primary information has now become electronically available as well. For instance, users will have access to the electronic full-text versions of scientific journals. Electronic textbooks and readers enable users to consult information outside the library, i.e. at the professional and private workplaces of the library's traditional customer.

It is crucial for us to recognise that all traditional library activities are being affected by this innovation. Within this context we can distinguish a number of trends.

One very important trend is the decreasing prominence of the library's physical collection, and the corresponding increase in the importance of information reference. The library is developing into a gateway, referring users to information irrespective of the location where that information is physically stored.

A second trend is taking place in the traditional appreciation of library tasks as some kind of overhead. This view will soon be completely out of date. In the future, library tasks will be regarded as directly productive forces. It is becoming ever more difficult to distinguish between the actual provision of information and the various processes in which that information is used. A university library, for example, is connected to a university, whose primary tasks are education and research. At its most fundamental level, education is characterised by the transfer of knowledge from teacher to student. The traditional borderline between knowledge transfer through teaching on the one hand and the provision of information by the library on the other is fading fast, due to the use of information technology in education. To a growing extent, library services are blending with the teaching process. Similar trends can be observed in the process of research and in other primary processes supported by library tasks, for example in policy-making and legal consultancy.

A third trend is eroding the self-evident position of the library in the process from information production to information consumption. However, while some of the traditional library tasks are under threat, new activities also present opportunities for strengthening the library's position. In order to understand the way in which the library's activities are influenced by the implementation of new technology, we should take a look at the so-called information chain. The role of the library is often described as one link in that chain. In the traditional information chain the main functions, i.e. the production, distribution, acquisition, and consumption of information, were always accommodated in strictly separated stages. However, the configuration of functions within the information chain has begun to change, and within this changing constellation all the parties involved are struggling to determine their positions. These developments show how important it is for those parties to innovate themselves and to experiment creatively with new roles instead of adhering to traditional patterns. Any forceful attempt to preserve the old structure will not only impede any development as such, but will also expose that structure to the increasing threat of arbitrary disintegration. One of the conclusions to be drawn from this

analysis is that libraries should try to become publishers of electronic documents instead of merely relying on agreements with commercial publishers.

At this moment the full and long-term implications of these developments are far from clear. One effect might very well be that the role of the library as an institution becomes less obvious. It is quite conceivable that the functions performed by the library in society and within institutions will merge with other functions that are performed by other parties than traditional libraries.

Access to electronic sources

Licensing
One of the distinguishing features of the digital library is that it provides access to digital information irrespective of the location where that information is stored. A modern library's policy should aim to make as much relevant information as possible accessible by electronic means, while allowing the library to retain paper subscriptions where necessary. A library can of course store information on its own server, but in general this is not very efficient unless the data involved is information in respect of which the library itself fulfils the publisher's role. Most of the information to which the library provides access is stored on servers of publishers or intermediary organisations. How can the access to that information be guaranteed? In practice, a number of possibilities can be distinguished.

1. Free access. This holds especially for Internet sites.
2. Full licenses for well-defined user groups. University staff and students are examples of such user groups. The costs tend to be high; quite a few scientific journals combine such licenses with compulsory subscriptions to paper journals, and sometimes include long-term non-cancellation clauses.
3. Licenses for well-defined user groups with a maximum number of concurrent users, an extreme variant of which would be to restrict access to one user at one specified workstation.
4. Pay per view licenses
5. No access.

Ideally, users have access to all sources of information. The financial conditions may of course vary among the different information sources and user groups. This ideal situation cannot be achieved unless flexible arrangements are in place between libraries and publishers. For that purpose, the automatic paper subscriptions in licenses for access to electronic information should be cancelled.

There are three main workable variants for licenses.

1. Free access.
2. Full licenses for well-defined user groups.
3. Pay per view.

Combinations between variants 2 and 3 will increase flexibility. Suppose a publisher has 500 journals, all of which are electronically available. Suppose also that 300 of these can be considered to be part of Library A's core collection. In this case, an effective model would grant the library full licenses for those 300 journals and pay per view licenses for the other 200. If any of the 200 non-core journals is viewed so often that the pay per view price exceeds the full license fee for that particular title, the pay per view license is automatically turned into a full license. Conversely, the journal in the core collection that is

consulted least often would be transferred to the pay per view collection. This model also allows for the flexible incorporation of newly published titles, starting with a pay per view license. Subvariants are of course possible. For instance, the parties might agree to a reduced full license price that gives pay per view rights at a reduced fee.

The main point is that the defined user group has access to all information sources, the price of which may differ per source depending, among others things, on the available budget. Such an arrangement would obviously call for adequate administrative tools to obviate the risk of users being continually confronted with administrative processes (a problem inherent to this type of flexibility), such as repeated requests for a password or a credit card number.

Information retrieval
Publishers often present their electronic databases with the help of a user-interface developed specifically for their own products, and tend to regard that interface as an added value item. However, this approach presents a number of problems.

Firstly, given that they are geared towards the "broadcasting" of information, such interfaces generally fail to take into account the users' wishes in a sufficient manner. This is not surprising, since most publishers only maintain limited contacts with end users.

Secondly, these interfaces are developed mainly for the publisher's own products. Some publishers, e.g. Elsevier, have successfully opened their interfaces for use by some other publishers, but those interfaces only provide access to a limited amount of information. Intermediary parties, such as subscription agents, also offer access to databases through their own interfaces. Again, however, the amount of information accessible through these interfaces is quite limited.

The consequence of this from the user's point of view is that he/she will have to perform the complicated task of scanning the information sources from different publishers by means of different interfaces. In other words, if you look for information you will have to know by which publisher it is offered in order to find it. From a user's point of view this is highly inefficient, to say the least.

Technically it is possible to offer a software solution to the multiple interface problem. There are different types of software available that perform information retrieval tasks independently of the interfaces developed by the publishers. In order to do so, they need direct access to the structured data of the publisher's information sources (coded mostly in very effective XML or SGML). Utrecht University Library has implemented software that enables this type of information retrieval (Muscat). In practice, however, there are obstacles that prevent this solution from realising its full potential. Several publishers are rather reluctant to provide access to their structured data, or ask a high additional fee in return.

In effect, we are confronted with a situation in which publishers impede the information retrieval process. Given that it is often impossible to buy pure content without any retrieval interface, the libraries are forced to pay additional fees for interfaces which actually prevent the user from effectively retrieving the information they need. The publishers justify the price they charge by presenting this as an added value 'service'.

As observed above, due to inflexible license structures users only have access

to a fragment of the full academic (worldwide) collection. The 'partitions' which the publishers create by offering a multiplicity of interfaces divide this fragment into even smaller sections. The resulting restrictions in the access to scientific information cause that information to be consulted less frequently than would have been possible without those restrictions.

In our view, information retrieval is not a service to be delivered exclusively by publishers. The libraries in particular have an important role as facilitators of the navigation possibilities available to the users. There are several reasons for this. Traditionally, libraries operate in close contact with their users and communicate with them in order to establish specific user needs. We should take into account that the users' information retrieval needs may vary between organisations in different environments, for instance between a library that serves government institutions and a university library. Furthermore, user demands may vary between different disciplines. Chemists would obviously make different types of demands on library services than theologians.

The user as a librarian

If libraries know who their users are, have developed good and close relationships with them and are also well informed about user demands, what possibilities do they have to further improve their services in a changing technological environment? The first thing they must do is prevent themselves from becoming an obstacle in that new environment as a redundant logistic or functional intermediary stage in the process. In other words, the libraries themselves should become invisible. The invisible library could offer the following services to its users.

a. Search facilities
Search facilities are subject to a number of basic user requirements, the most important of which can be summarised as follows.

Users will want to be able to start the search process immediately, without first having to study complex interfaces and codes. They are looking for information and cannot be expected to be interested in the technical structure or format of the data involved. Neither are users likely to be interested in the origin of the source (the identity of the publisher or intermediary), or in the location where the information they need is physically stored. They just want to find an answer to a particular question. During the search process, moreover, users will only want to be presented answers that are fully relevant to their question, without being swamped by thousands of articles only marginally related to the subject.

These general user requirements must be translated into functional requirements that the Information Retrieval (IR) system should be able to fulfil. Most importantly, the IR system is required to:

- allow search questions to be asked in natural language;
- allow all data sources to be searched simultaneously on the basis of a single search question;
- make use of high-quality and professional software (including high recall and precision scores; most software developed under time pressure by unqualified staff fails to meet these strict criteria)
- enable users to search through sub-collections of the sources, which implies that it must be possible for the sources themselves to be divided into sub-disciplines so as to reduce the search domain. These functional requirements are clearly derived from user needs and should serve as guiding principles in the purchase or development of IR systems.

b. Personal alerting system
It is vital to provide an easily accessible information universe which the user can enter independently provided he is equipped with the proper IR tools. In addition, the user should be served by his own personal assistant, who offers packages of information tailored to the user's individual reader profile. Such assistants have already been created in self-learning software known as intelligent agents technology. These assistants, or agents, are used in the construction of a personal alerting system. The set-up and testing of such personal alerting systems is the responsibility of support organisations, for example university libraries; their use requires no additional intermediaries. Researchers, teachers and students will all make use of this tool independently and will only require assistance from the library when they need specific instructions or are confronted with specific problems.

c. Personal homepage facilities
The traditional library organisation was characterised by a decentralised structure in which individual libraries were found in the locations where teaching and research activities actually took place (mostly in the university professors' rooms). In order to improve efficiency, to solve logistic problems and, above all, to cut costs books and magazines were relocated to central or faculty libraries. Double subscriptions were cancelled. While obviously provoking some protest from among faculty members, this operation was in many cases inevitable.

Due to the advent of the Internet and electronic sources of information, the physical location of those sources has become irrelevant. From behind a PC in his or her own office, today's scientist has access to a range of sources that is incomparable to the access provided by the traditional library in the professor's lecture room. While the range of sources offers clear and major advantages, its very extensiveness also causes a number of problems. Some of these can be obviated by IR systems and personal agents, but more tools are required; tools that help the user to create and manage his/her own limited but tailor-made collection. These tools allow the scientist to become a librarian himself, but a librarian who has no other clients. Scientists need tools to perform this role, tools that help them organise their own articles, research data, teaching material, etc.; tools which respect the preferences of their users and can deal with even the most idiosyncratic approach to building up personal collections. It is one of the library's tasks to make such tools available. They can be described as the creation of facilities, the supply of user instructions for those facilities and the provision of assistance when problems occur, and are all consistent with user demands.

d. Facilities for the integration of information services in the user's primary processes
Information cannot be separated from the purpose it is used for. At universities, that purpose can be found in the primary processes of education and research. This is why the university library's tasks are focused on the integration of information services in the user's primary processes. Such integration is not achieved automatically, however. We shall present an example from the world of teaching to illustrate our point.

A teacher who is preparing a new online reader will need access not only to all relevant sources and search and selection tools, but also to online publishing facilities. These may be templates provided with conversion programmes which adapt the content (text, image, video) for presentation on the world wide web, or old readers already converted from the old, illegible formats to formats that

enable the teacher to cut and paste selected items for use in his new reader. They may be interfaces for database publishing, or administrative procedures that affect the available space on the server, security measures or technical privileges granted to the teacher in question. Another example is the virtual 'primer'. In addition to preparing new material for their lectures, it is not unusual for teachers to draw up primers for their students, including books, journals and other sources of information which the students are supposed to read within the context of the course.

In these examples, the tools that help teachers compile virtual primers and the online publishing facilities are perfectly geared towards the primary process. The library consists of information and software and has been fully integrated into the teaching process.

e. Interactivity
The tasks of the library may reach beyond the efficient and effective supply of information. Researchers do not merely consume information, but also communicate intensively with their colleagues. When they read a scientific article, many researchers will want to respond, ask the author questions or give critical comments. In effect, the first academic journals, which appeared in the seventeenth century, supported this type of academic dialogue. The exchange of research results and attempts to refute and validate them through debate and comments are no less important than the access to the relevant sources of information.

Given that library tasks focus on improvement and facilitation of the entire primary process, it seems obvious to extend them so as to include the facilitation of academic communication. The user not only creates his/her own library; via the library access, he/she can actually participate in the academic dialogue with colleagues. This is why the provision (and maintenance) of linkage between interaction facilities and sources of information should be included in the library's task package.

The integration of the library in primary processes can advance to such a degree that the library becomes altogether invisible as a separate institute. The user takes on the role of the librarian. He gains access to a vast amount of information and is provided with a set of tools and aids that will help him extract the data he needs and arrange and process it in the manner that suits him best.

Consequences for collection management

In the previous paragraphs we presented a view on library services in which libraries provide access to as much electronic information as possible and offer additional services that enable users to organise the sources of information they need for personal professional purposes.

In discussions about the future of the library, the 'collection' tends to be seen as a concept that will continue to play a prominent role. The question is whether that prominence will be borne out by future developments. A key feature of collections is their status as sources of information gathered for the benefit of the library's users. This implies that the information they contain has been deliberately selected. However, this kind of explicit and deliberate selection is absent from most of the library services described above. The library provides 'anything, anytime, anywhere' from the collection of high-quality academic sources. The financial conditions may differ (campus-wide license or pay-per-view), but these are not so much influenced by a library's selection than

by the actual behaviour of its users. In other words, it is not realistic to regard the provision of access to electronic journals as an activity that forms part of a library's 'collection'. These sources together constitute something like a universal collection, which will continue to grow. We are witnessing the advent of a truly global certified scientific collection. In this view, it is no longer the library that decides which data to select, but the individual user himself. The user can arrange the information sources relevant to his own professional needs into a tailor-made collection with the help of the tools presented by the library, organise those sources according to the use he expects to make of them, and integrate them into his own publications or educational programmes.

These considerations do not apply to certified sources, such as freely accessible sources on the Internet. In that area, libraries will continue to be responsible for the selection of high-quality scientific material; a selection in the form of pointers, sets of references. However, the selection of material is not the prerogative of the library. On the contrary; the library should restrict itself primarily to the collection of references (bookmarks) which in turn are collected by scientists for their own use. As a secondary task, the library should (automatically) cancel double references, arrange references into disciplines and present them via homepages. These activities are necessary in order to allow the various IR tools and agents to function optimally and to visualise the designated sources.

In this field, cooperation with scientists will be extremely efficient. Far-reaching forms of cooperation among the libraries themselves are also quite conceivable. What is known in the physical world as the alignment of collection formation profiles, or priority area formation, is, understandably, only rarely successful. This concept may yield countless advantages for the virtual selection of Internet sources. The task of designating quality sources can be distributed due to the very fact that the physical location of the information is irrelevant and, hence, allows universal access. This is because this task does not involve the development of a central collection, but rather the certification of a sub-collection of information.

From this point of view, the notion of 'collection management' acquires a new dimension. In part, collection management is limited to measuring the frequency with which the sources are consulted and the type of use that is made of them. Related to, and indeed derived from this is the management not of the collection itself, but of various types of licenses. In addition, collection management refers to a distributed process of assessment of the quality of freely accessible sources on the Internet.

Latest Revision: *May 9, 2000*

Copyright © 1995-2000
International Federation of Library Associations and Institutions
www.ifla.org